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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/821,882

04/12/2004

Moo Hwan Kim

KIMM3007/EM

2491

23364

7590

05/23/2006

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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/821,882

Applicant(s)

KIM ET AL.

Examiner

Gail Verbitsky

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 4-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-9 is/are allowed.
- 6) ☒ Claim(s) 10 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 11-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1, 2, 3, 14 have been renumbered respectively as 15, 16, 17, and 18. ***Response to Arguments***

2. Since the Examiner has previously indicated the allowable subject matter that caused the Applicant to cancel the rejected claims, the finality of the previous Office action is hereby withdrawn.

In the present amendment, the applicant refers to the Office Action mailed on May 12, 2005. However, the Office Action of May 12, 2005 was issued to reject the originally filed claims on April 12, 2004. Since later, in response to the Office Action (May 12, 2005), the applicant amended the claims and filed new claims on August 12, 2005 and the present amendment (May 02, 2006) are identical to the amendment filed on August 12, 2006 (not originally filed claims), in the rejection on the merits, the Examiner refers to the amendment filed on August 12, 2005.

Therefore, A) the present Office Action is made Final since this rejection is necessitated by the amendment to the originally filed claims on August 16, 2005.

Also, B) Response to arguments is hereby repeated from the Office action mailed on October 19, 2005: Applicant's arguments filed on May 02, 2006 (August 12, 2005) have been fully considered but they are not persuasive.

Applicant states that O'Neill and Schawe disclose calorimetric instrument different from the instant invention. This argument is not persuasive because, both, O'Neill and Schawe teach devices for measuring of heat flux/ flow/ dissipation from a heater, as claimed by applicant.

Applicant states that the present invention measures heat dissipation by using the similarity law. This argument is not persuasive because this limitation is not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

Applicant states that the target heating element of the instant invention is not controlled by a control unit. This argument is not persuasive because this limitation is not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

With respect to the newly added limitation "the target heating element emits heat itself": O'Neill and Schawe teach that the target heating element is a heater, which, in the broadest reasonable interpretation, acts as a heat source, and thus, itself emits heat.

### ***Specification***

3. The amendment filed on August 12, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: it appears that

the limitation stating "the target element emits heat by itself" has not been described in the specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15-18 (as renumbered) are finally rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (U.S. 5672289).

O'Neill discloses in Fig. 1 a device for measuring heat from a heater and controlling a heater, the device comprising a reference heating element/ heater 22 and a sample/ target heating element/ heater 24 which are having size and outer configuration substantially identical to each other, as shown in Fig. 1. The device comprises a heater control unit 42, a pair of temperature sensors 10, 12 measuring temperature of a sample and a reference sample respectively, which temperatures are representative of heat flow from the sample heater (emitting heat by itself) and the reference heater respectively, and thus, in a broad sense, it is considered, that it is representative of the sample heater and the reference heater.

The control unit 42 controls the reference heater (and the sample heater) such that the difference (error) of temperatures obtained by the reference temperature sensor (representative the reference heater) 12 and the sample temperature sensor

(representative the sample heater) 10 is minimized (becomes substantially identical) (col. 2, lines 55-67 and entire col. 3).

For claim 16: the reference heating element 22 is an electrical heating element (resistance) and thus, provided with an electrical heater (heat source).

For claim 17: in response to the control unit that compares the temperatures, the power is being supplied by the control unit to the sample heater and the reference heater so as to eliminate said temperature difference/ error and thus, to make the temperatures substantially equal to each other (col. 3, lines 8-18).

With respect to the preamble of claims: the preamble of the claims does not provide enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and a portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kropa v. Robie, 88 USPQ 478 (CCPA 1951).

6. Claims 15-18 (as renumbered) are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Schawe et al. (U.S. 6170984) [hereinafter Schawe].

Schawe discloses in Fig. 1 a device for measuring heat from a heater and controlling a heater, the device comprising a reference heating element/ heater 50 and a sample/ target heating element/ heater 48 which are having size and outer configuration substantially identical, as shown in Fig. 1. The device comprises a heater control unit (temperature programmer) 60, a pair of temperature sensors 44, 54 measuring temperature of a sample and a reference sample respectively, which

temperatures are representative of heat flow from the sample heater (emitting heat by itself) and the reference heater respectively, and thus, in a broad sense, it is considered, that it is representative of the sample heater and the reference heater. The control unit 60 controls the reference heater (and the sample heater) such that the difference of temperatures obtained by the reference temperature sensor (representative the reference heater) 50 and the sample temperature sensor (representative the sample heater) 48 becomes negligible (becomes substantially identical) (entire col. 9).

For claim 16: the reference heating element 50 is an electrical heating element (resistance) and thus, provided with an electrical heater (heat source).

For claim 17: in response to the control unit that compares the temperatures, when there is a difference between the temperatures, the differential power increment is fed to the sample heater 48 and the reference heater 50 to correct the temperature difference (col. 4, lines 58-67).

With respect to the preamble of claims: the preamble of the claims does not provide enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and a portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kropa v. Robie, 88 USPQ 478 (CCPA 1951).

7. Claim 10 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neill (U.S. 5672289).

O'Neill discloses in Fig. 1 a device for measuring heat from a heater and controlling a heater, the device comprising a reference heating element/ heater 22 and a sample/ target heating element/ heater 24 which are having size and outer configuration substantially identical to each other, as shown in Fig. 1. The device comprises a heater control unit 42, a pair of temperature sensors 10, 12 measuring temperature of a sample and a reference sample respectively, which temperatures are representative of heat flow from the sample heater (emitting heat by itself) and the reference heater respectively, and thus, in a broad sense, it is considered, that it is representative of the sample heater and the reference heater.

The control unit 42 controls the reference heater (and the sample heater) such that the difference (error) of temperatures obtained by the reference temperature sensor (representative the reference heater) 12 and the sample temperature sensor (representative the sample heater) 10 is minimized (becomes substantially identical) (col. 2, lines 55-67 and entire col. 3). *The fact that the temperatures are kept equalized, would suggest that there is a relationship between heat dissipation of one sample (i.e., test sample) and heating value of another sample (i.e., reference sample). Therefore, by knowing said heating value, the heat dissipation could be obtained.*

In addition, the reference heating element 22 is an electrical heating element (resistance) and thus, provided with an electrical heater (heat source).

Furthermore, in response to the control unit that compares the temperatures, the power is being supplied by the control unit to the sample heater and the reference heater so as



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to eliminate said temperature difference/ error and thus, to make the temperatures substantially equal to each other (col. 3, lines 8-18).

***Allowable Subject Matter***

8. Claims 4-9 are allowed. Claims 11-13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

**9. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571/ 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GKV

*Gail Verbitsky*  
Primary Patent Examiner, TC 2800



May 17, 2006